You are cordially invited to attend

**Wednesday, January 10, 2018**

12:00 pm - 1:00 pm

252 Erickson Hall

Michigan State University

Light refreshments provided

**Leona Schauble**

Research Professor of Education, Vanderbilt University

**Should we teach young students domain general scientific thinking skills?**

**Abstract:**

It is worthwhile to reconsider the relative advantages of regarding scientific thinking in young children through a domain general perspective or through a domain specific lens, especially with regard to how these differing views influence educational practice in the elementary grades. Domain-general frameworks help policy makers and educators achieve analytic purchase on goals for science learning. They steer the field toward a clear vision of “what develops” and propose answers to the question: What is it, beyond content knowledge, that students should come to understand over the 12 years of their science education? If instructional goals, content, and tasks are to cumulate toward desired endpoints, a vision that is responsive to this question needs to be shared at all levels of the educational system. However, the need for this focus at the planning level does not imply that instruction should be oriented toward requiring students to learn and apply heuristics and strategies derived from these frameworks. I will be suggesting that it may be more productive to begin with a bottom-up approach, one in which domain-general criteria and heuristics emerge from students’ activity rather than being introduced as authoritative rules that guide scientific activity prospectively.

Leona Schauble is Professor Emerita and Research Professor of Education at Vanderbilt University. She is a cognitive developmental psychologist with research interests in scientific and mathematical reasoning. In out-of-school contexts, she worked for 15 years in children’s television and then in gallery design teams for both children’s and science museums. Her current research, in collaboration with Richard Lehrer, is on the origins and development of model-based reasoning in school mathematics and science. Lehrer and Schauble work collaboratively with practicing teachers on an extended basis to generate reform in teaching and learning of math and science at levels from kindergarten through middle school.

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